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# EUROPEAN PATENT OFFICE

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## Patent Abstracts of Japan

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APPLICATION NUMBER : 07284220

APPLICANT : KYOCERA CORP;

INVENTOR : MASUDA SHINGO;

INT.CL. : A61L 27/00 A61F 2/30 B29C 69/00

TITLE : MANUFACTURE OF SLIDING MEMBER FOR PROSTHETIC JOINT

ABSTRACT : PROBLEM TO BE SOLVED: To provide a sliding member for an prothetic joint having a small creep deformation factor and no deterioration of a surface layer and excellent in sliding characteristic and abrasion resistance by irradiating a prescribed quantity of  $\gamma$ -rays to ultrahigh-molecular weight polyethylene as the absorbed dose, heat-treating it at the prescribed temperature, then molding it into the desired shape by cut machining.

SOLUTION:  $\gamma$ -rays 500-10,000kGy are irradiated to ultrahigh-molecular weight polyethylene as the absorbed dose, it is heat-treated at 80-200°C, then it is cut-machined into the desired shape to manufacture a sliding member for an prothetic joint. When  $\gamma$ -ray irradiation and heat treatment are combined, the creep deformation is suppressed to less than 1%, and the creep resistance and abrasion resistance can be remarkably improved. The sliding member is molded into the desired shape by cut machining after  $\gamma$ -ray irradiation and heat treatment, the deteriorated raw material surface of the ultrahigh-molecular weight polyethylene is removed, and the sliding characteristic and abrasion resistance of the sliding face can be improved.

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